

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/552,686  
Source: P4710  
Date Processed by STIC: 10/24/05

# ***ENTERED***



PCT

## RAW SEQUENCE LISTING

DATE: 10/24/2005

PATENT APPLICATION: US/10/552,686

TIME: 10:48:44

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\10242005\J552686.raw

3 <110> APPLICANT: CropDesign N.V.  
 5 <120> TITLE OF INVENTION: Stress Tolerance  
 7 <130> FILE REFERENCE: CD-088-PCT  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/552,686  
 C--> 9 <141> CURRENT FILING DATE: 2005-10-11  
 9 <150> PRIOR APPLICATION NUMBER: EP 03076064.9  
 10 <151> PRIOR FILING DATE: 2003-04-11  
 12 <160> NUMBER OF SEQ ID NOS: 10  
 14 <170> SOFTWARE: PatentIn version 3.2  
 16 <210> SEQ ID NO: 1  
 17 <211> LENGTH: 1344  
 18 <212> TYPE: DNA  
 19 <213> ORGANISM: Beta vulgaris  
 22 <220> FEATURE:  
 23 <221> NAME/KEY: misc\_feature  
 24 <222> LOCATION: (3)..(3)  
 25 <223> OTHER INFORMATION: n is a, c, g, or t  
 27 <400> SEQUENCE: 1  
 W--> 28 cgncctgcagg aattcggcac gagtttcgaa gtacccaaga ctccaagaga ggacgaactt 60  
 29 cagtttctct ctctcgaaa tcttaattct ctctgctcaa atccctaatt ctctctctctc 120  
 30 acgatcgtag agtctctgtt ttctactgta taaatctatt caaacaattt tctctctcct 180  
 31 attatttcaa ttctcggtttg ctaattcaag gtgaatcaaa tgtcggcaaa tatgttttcc 240  
 32 agactttttg gtgctaaatc tcgtgatgca gctactactg agactacttt atctacatta 300  
 33 gagaaattga atgagacact tgaaatgcta gagaagaaag agcagcttct aatgaaaaag 360  
 34 gctactgcag aggttgaaaa ggccaaagag ttcaacaagg caaagaataa acgtgctgct 420  
 35 atacaatgtt taaagaggaa aaggttatac gaacagcaag tcgagcaggt tgggaatttt 480  
 36 caactacgaa ttcatgatca gatcataatg cttgattctg caaaagcaac gacagagaca 540  
 37 gttgctgcat tgagatctgg tgctagtgtc atgaaggcta tgcagaaagc aacaaacatt 600  
 38 gatgatgtgg acaagacaat ggatgagatc aatgagcaga ccgataactt gagacagata 660  
 39 caggaggcac tagctactcc tgttggtgca actgattttg atgaggatga attggaagct 720  
 40 gagcttgaag aacttgaagg agctgagttg gaggaacaac ttctacaacc atttacaact 780  
 41 gcccttacgg caccaattca tgttccagaa ggcaagctgc cagcaaggcc aacaccccaa 840  
 42 aagaactctg aggaagatga actcgctgcg ttacaagcag aaatggcact ttgaaggctt 900  
 43 ttcttttttc atgtttataa tcatgtccca aagaaatgga aacgggctgg aaaaaggaaa 960  
 44 aggcaaagga aaagaaaagg aaaagaaaaa gattgaaaat ctttattgat tgatggtggt 1020  
 45 atattttaagt attgagtgtt gatagcatct tgttgctcat tactatatgc ctatatggag 1080  
 46 tacctgttat taattggtaa tgttaatgca aatattgtct ataccattga tgaacaaaga 1140  
 47 tgggggctgt aaactcttgg ttgttttttc gtttttcaat tttttgtttt cgtttttatt 1200  
 48 ttccagtcac ctactgggtc tagtgactgg tgacaattgc tgtacagaga ttttggtgca 1260  
 49 cttgagctgc tgggtcaacag actatgcaga ctgtcagatt tataaaatca gaaagctggc 1320  
 50 aaaaaaaaaa aaaaaaaaaa cgag 1344  
 52 <210> SEQ ID NO: 2  
 53 <211> LENGTH: 224

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54 &lt;212&gt; TYPE: PRT

55 &lt;213&gt; ORGANISM: Beta vulgaris

57 &lt;400&gt; SEQUENCE: 2

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58 Met Ser Ala Asn Met Phe Ser Arg Leu Phe Gly Ala Lys Ser Arg Asp
59 1          5          10          15
61 Ala Ala Thr Thr Glu Thr Thr Leu Ser Thr Leu Glu Lys Leu Asn Glu
62          20          25          30
64 Thr Leu Glu Met Leu Glu Lys Lys Glu Gln Leu Leu Met Lys Lys Ala
65          35          40          45
67 Thr Ala Glu Val Glu Lys Ala Lys Glu Phe Thr Arg Ala Lys Asn Lys
68          50          55          60
70 Arg Ala Ala Ile Gln Cys Leu Lys Arg Lys Arg Leu Tyr Glu Gln Gln
71 65          70          75          80
73 Val Glu Gln Val Gly Asn Phe Gln Leu Arg Ile His Asp Gln Ile Ile
74          85          90          95
76 Met Leu Asp Ser Ala Lys Ala Thr Thr Glu Thr Val Ala Ala Leu Arg
77          100         105         110
79 Ser Gly Ala Ser Ala Met Lys Ala Met Gln Lys Ala Thr Asn Ile Asp
80          115         120         125
82 Asp Val Asp Lys Thr Met Asp Glu Ile Asn Glu Gln Thr Asp Asn Leu
83          130         135         140
85 Arg Gln Ile Gln Glu Ala Leu Ala Thr Pro Val Gly Ala Thr Asp Phe
86 145         150         155         160
88 Asp Glu Asp Glu Leu Glu Ala Glu Leu Glu Glu Leu Glu Gly Ala Glu
89          165         170         175
91 Leu Glu Glu Gln Leu Leu Gln Pro Phe Thr Thr Ala Pro Thr Ala Pro
92          180         185         190
94 Ile His Val Pro Glu Gly Lys Leu Pro Ala Arg Pro Thr Pro Gln Lys
95          195         200         205
97 Asn Ser Glu Glu Asp Glu Leu Ala Ala Leu Gln Ala Glu Met Ala Leu
98          210         215         220

```

100 &lt;210&gt; SEQ ID NO: 3

101 &lt;211&gt; LENGTH: 1341

102 &lt;212&gt; TYPE: DNA

103 &lt;213&gt; ORGANISM: Beta vulgaris

105 &lt;220&gt; FEATURE:

106 &lt;221&gt; NAME/KEY: misc\_feature

107 &lt;222&gt; LOCATION: (934)..(934)

108 &lt;223&gt; OTHER INFORMATION: n is a, c, g, or t

110 &lt;400&gt; SEQUENCE: 3

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111 cccgcctgca ggaattcggc acgagagaaa acctgtctta tacttctcta ctttgctttt      60
112 ttgttttggt tagccaacca atctaacca gaattgataa tccactctt caattccctc      120
113 aaaatttttc ttccaaaatt catttcact attttcagat atttcacac taaaatctcc      180
114 tcgagttaac ctaatcactc cattcttatt tctctcggga aaaaaacctt atcaatcaac      240
115 ttacgcgggt ttattctccc gatctttttc gtttctcgt aatttttag cgatcaccca      300
116 ttttcgttaa atatgtttac aagggttttc ggtaaacctt aggaaggaac aacgagtgtc      360
117 gttgcaacgt tagacaaatt gagtgagaca ctcgaaatgt tggaaaaaaa agaacaggtg      420
118 cttttgaaga aggctggtgc tgaggttgaa aaggccaagg agttcactag agcaaagaac      480
119 aaacgtgctg ctataacttg tctgaagagg aagaggctat acgaacaaca aatagagcag      540

```

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Input Set : A:\Sequence Listing.txt

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120 cttggaaaca tgcagttgcg aattcatgat cagatgatac tgcttgaagg ggcaaaggca 600
121 acaacagaga ctgtcgatgc attgaggtct ggtgcctcgg ctatgaaggc catgcaaaag 660
122 gcaacaaaca tcgataatgt ggataaaact atggacgaga tcaatgagca gacagagaac 720
123 ttaaaacaaa tacaggaagc tctctctgct ccaatcggtg cagcagctga cttttgatga 780
124 ggatgacctg aaagcagagc ttgaagagct agaaggtgct gaattgaaga agcaacttat 840
125 cagcccagct actactgctc ctgctgcacc agtgcctgct cctgctggaa aacaacctga 900
W--> 126 cgccccctgca cctcggggaag aatactgctt gaanaggatg agctcgccgc gttgcaagca 960
127 gagatggccc ctgtaaaaag tttttctgga ctggaatata ggagttggtc ttacatcaaa 1020
128 gtagctgtat aataagctaa ttattattgc tttgggtacc acctttacag gcacgtatta 1080
129 cccaatcacg gatatttggg aataaaatgt gctgtgtagg ttgctgatg ttgttgatta 1140
130 ggccgtagtt ctccttgtgc caggtcttga ttgcacctta ttctcgatgt aaatttcaga 1200
131 ttctcttata gacattgtaa tttgtgacaa aatatcgatc atttggtagc agttaaccct 1260
132 tcacatatgt aaaagaaata aaatacaatt cttgtatgac tttattttta ccaaaaaaaaa 1320
133 aaaaaaaaaa aactcgaggg g 1341
135 <210> SEQ ID NO: 4
136 <211> LENGTH: 154
137 <212> TYPE: PRT
138 <213> ORGANISM: Beta vulgaris
140 <400> SEQUENCE: 4
141 Met Phe Thr Arg Val Phe Gly Lys Pro Lys Glu Gly Thr Thr Ser Ala
142 1 5 10 15
144 Val Ala Thr Leu Asp Lys Leu Ser Glu Thr Leu Glu Met Leu Glu Lys
145 20 25 30
147 Lys Glu Gln Val Leu Leu Lys Lys Ala Gly Ala Glu Val Glu Lys Ala
148 35 40 45
150 Lys Glu Phe Thr Arg Ala Lys Asn Lys Arg Ala Ala Ile Thr Cys Leu
151 50 55 60
153 Lys Arg Lys Arg Leu Tyr Glu Gln Gln Ile Glu Gln Leu Gly Asn Met
154 65 70 75 80
156 Gln Leu Arg Ile His Asp Gln Met Ile Leu Leu Glu Gly Ala Lys Ala
157 85 90 95
159 Thr Thr Glu Thr Val Asp Ala Leu Arg Ser Gly Ala Ser Ala Met Lys
160 100 105 110
162 Ala Met Gln Lys Ala Thr Asn Ile Asp Asn Val Asp Lys Thr Met Asp
163 115 120 125
165 Glu Ile Asn Glu Gln Thr Glu Asn Leu Lys Gln Ile Gln Glu Ala Leu
166 130 135 140
168 Ser Ala Pro Ile Gly Ala Ala Ala Asp Phe
169 145 150
171 <210> SEQ ID NO: 5
172 <211> LENGTH: 1019
173 <212> TYPE: DNA
174 <213> ORGANISM: Beta vulgaris
176 <220> FEATURE:
177 <221> NAME/KEY: misc_feature
178 <222> LOCATION: (5)..(5)
179 <223> OTHER INFORMATION: n is a, c, g, or t
181 <220> FEATURE:
182 <221> NAME/KEY: misc_feature

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183 <222> LOCATION: (1001)..(1001)
184 <223> OTHER INFORMATION: n is a, c, g, or t
186 <400> SEQUENCE: 5
W--> 187 cccgncgtgca ggaattcggc acgagcgcgac tcccccaattc tcctttctctc aaagatggga      60
188 aacaccgaga aactaatgaa ccagatcatg gagctcaaat tcacctctaa atcacttcaa      120
189 cgtcaatctc gtaagtgcga gaaagaagaa aaagctgaga aactcaaagt caagaaagca      180
190 atcgagaaaag gaaacatgga tggagctcga atttacgccg aaaacgcaat tcgtaagcgt      240
191 actgaacaga tgaactactt gcgcctcgct tctcgctcg acgccgtcgt ttcgcgctc      300
192 gatactcaag ctaagatgca aaccatcgga aaatcgatgg gatcaattgt taaatcgctt      360
193 gagtcgtctt tgaataccgg taatttgcag aagatgtcgg agacaatgga caattttgag      420
194 aagcaatttg ttaatatgga agttcaggct gagtttatgg agagttctat ggctgggagt      480
195 acttcgcttt cgactcccg aaccgagggt aatagtttga tgcagcagggt ggcggatgat      540
196 tatggccttg aggtttctgt gggtttgctt caggctgctg gacatgctat tcctgttccg      600
197 aaggcggcgg agaaggttga tgaggatgat cttaccagga ggctcgccga gctcaaggct      660
198 cgaggttgaa gtcaaaggta aaaagggttaa ggttttattg ataagtgtgt atagattatg      720
199 agctttactg atgatcaacc ctctgtgata tgggggtttg atgataattt gctctatatt      780
200 atggagattt ggagcttttg gaaccgataa ctgtggatgg ttttaattatg tattatattg      840
201 tatttgtcta ttggaaaaaa aaaaaaaaaa aaaactcgag ggggggcccg gtaccaagat      900
202 ggcctttggt ggggtgaaga aggaaaaaga cagaaacgac ttaattacct acttgaaaaa      960
203 agcctgtgag taaacaggcc ccttttcctt tgtcgatatc ntgtaattag ttagggggt      1019
205 <210> SEQ ID NO: 6
206 <211> LENGTH: 204
207 <212> TYPE: PRT
208 <213> ORGANISM: Beta vulgaris
210 <400> SEQUENCE: 6
211 Met Gly Asn Thr Glu Lys Leu Met Asn Gln Ile Met Glu Leu Lys Phe
212 1 5 10 15
214 Thr Ser Lys Ser Leu Gln Arg Gln Ser Arg Lys Cys Glu Lys Glu Glu
215 20 25 30
217 Lys Ala Glu Lys Leu Lys Val Lys Lys Ala Ile Glu Lys Gly Asn Met
218 35 40 45
220 Asp Gly Ala Arg Ile Tyr Ala Glu Asn Ala Ile Arg Lys Arg Thr Glu
221 50 55 60
223 Gln Met Asn Tyr Leu Arg Leu Ala Ser Arg Leu Asp Ala Val Val Ser
224 65 70 75 80
226 Arg Leu Asp Thr Gln Ala Lys Met Gln Thr Ile Gly Lys Ser Met Gly
227 85 90 95
229 Ser Ile Val Lys Ser Leu Glu Ser Ser Leu Asn Thr Gly Asn Leu Gln
230 100 105 110
232 Lys Met Ser Glu Thr Met Asp Asn Phe Glu Lys Gln Phe Val Asn Met
233 115 120 125
235 Glu Val Gln Ala Glu Phe Met Glu Ser Ser Met Ala Gly Ser Thr Ser
236 130 135 140
238 Leu Ser Thr Pro Glu Thr Glu Val Asn Ser Leu Met Gln Gln Val Ala
239 145 150 155 160
241 Asp Asp Tyr Gly Leu Glu Val Ser Val Gly Leu Pro Gln Ala Ala Gly
242 165 170 175
244 His Ala Ile Pro Val Pro Lys Ala Ala Glu Lys Val Asp Glu Asp Asp
245 180 185 190

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Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\10242005\J552686.raw

247 Leu Thr Arg Arg Leu Ala Glu Leu Lys Ala Arg Gly

248 195 200

250 &lt;210&gt; SEQ ID NO: 7

251 &lt;211&gt; LENGTH: 1510

252 &lt;212&gt; TYPE: DNA

253 &lt;213&gt; ORGANISM: Beta vulgaris

255 &lt;220&gt; FEATURE:

256 &lt;221&gt; NAME/KEY: misc\_feature

257 &lt;222&gt; LOCATION: (2)..(3)

258 &lt;223&gt; OTHER INFORMATION: n is a, c, g, or t

260 &lt;400&gt; SEQUENCE: 7

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W--> 261 tnncccgggc tgcaggaatt cggcaccgagc tcatttctct acatcaaaaa cacaacaaag      60
262 agatcaccca tggcggaaga aacccataag ccagaatcaa cgggtggctga agtgggtggtt      120
263 ccagtagccg agaaaccagc tgagaagcca gctgagaagg cagttctacc acctgaagct      180
264 gagaaactag ctgcagctga atcagctgaa gccgagaagc cagctgattc agccgagggt      240
265 aagatagctc aacaagtctc attcaaagag gagactaatg ttgcaagtga gctacctgag      300
266 ctacatagaa aggtctctga ggacttgaag aaacttattc aagaagccct cgagaagcac      360
267 gagttctctt ctctctctcc tccgcctccg cctgctccag ctaaagttag ggagaaggcg      420
268 gaagagaaga aagaggaaca acctccatcc accacctcca ccaccaccac caccaccacc      480
269 gcggtttcag atgaggttgc tgttgctcct ccatacgaag aggccccgaa aactgacgag      540
270 gcctctccga aagtggagga ggagcctgca aaaatagttg agcaaccacc tacaacaccg      600
271 gcagaagaac ctgaaccagc aaaaacacct gaggttggtg ttgctgaaga ggagaaaact      660
272 ggtgaggata ttaaagaaac tatagtagtc gaggttgcca caactacagc agcaccagta      720
273 ctaacagaac cagaatctgt tgaggagaca caaaagaag ctgaagttgt agtggagaa      780
274 tcaccaaagg agccagaaga agtatcaata tggggaattc cacttcttgc tgatgaaaga      840
275 agtgatgtaa ttctattgaa attcttaaga gcaagagatt atagagtga agatgctttc      900
276 actatgatta gaaatactgc tcgttggaag aaagaatttg aggttgattc tttacttgat      960
277 gaagatcttg gaaatgatta tgagaaagtt gtttttacac atggagttga taaacaagg      1020
278 cgtcctggtt gttataatgt gtttgagag tttcaaaata aggaacttta tcagaatact      1080
279 ttctctgatg cagaaaaaag gaaaaagttc ttgagatggt tgattcaatt ccttgaaaaa      1140
280 actattagaa ctcttgattt tagtcctgaa ggaattaatt cttttgttct tgtaaatgat      1200
281 ttgaagaatt ctctgggta tggtaagaga gatctttaca aagttattga caagtttctt      1260
282 gagattctcc aggataatta cccagaattt gctgctaaac agttgtgcat caatgtttca      1320
283 tgggtggtctt ggcatacaac tggatctatt tgactgtatt tacaccaagg agcaagagca      1380
284 agtttggtgt tgcaagcca tctaaaactg ctgagaccct tttcaagtac atagctctcg      1440
285 agcaggtgcc tgttcaattt ggtgggcaca gcaagtttgg cgagcatgag ttttccctcg      1500
286 ctgatactgt
288 <210> SEQ ID NO: 8
289 <211> LENGTH: 427
290 <212> TYPE: PRT
291 <213> ORGANISM: Beta vulgaris
293 <400> SEQUENCE: 8
294 Met Ala Glu Glu Thr His Lys Pro Glu Ser Thr Val Ala Glu Val Val
295 1 5 10 15
297 Val Pro Val Ala Glu Lys Pro Ala Glu Lys Pro Ala Glu Lys Ala Val
298 20 25 30
300 Leu Pro Pro Glu Ala Glu Lys Leu Ala Ala Ala Glu Ser Ala Glu Ala
301 35 40 45
303 Glu Lys Pro Ala Asp Ser Ala Glu Ala Lys Ile Ala Gln Gln Val Ser

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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/552,686

DATE: 10/24/2005  
TIME: 10:48:45

Input Set : A:\Sequence Listing.txt  
Output Set: N:\CRF4\10242005\J552686.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 3  
Seq#:3; N Pos. 934  
Seq#:5; N Pos. 5,1001-  
Seq#:7; N Pos. 2,3  
Seq#:9; N Pos. 2049

## VERIFICATION SUMMARY

DATE: 10/24/2005

PATENT APPLICATION: US/10/552,686

TIME: 10:48:45

Input Set : A:\Sequence Listing.txt

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L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:28 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0

L:126 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:900

L:187 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0

M:341 Repeated in SeqNo=5

L:261 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0

L:420 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:2040